

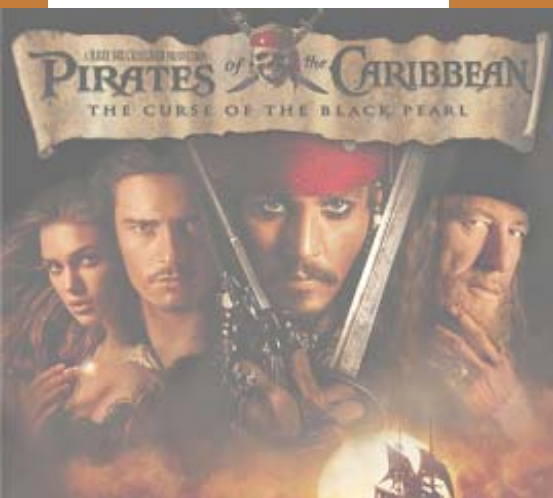
DIGITAL BROADCAST CONTENT PROTECTION

MB Docket No. 04-59

PRESENTATION TO FCC
APRIL 2, 2004



SmartRight[™]



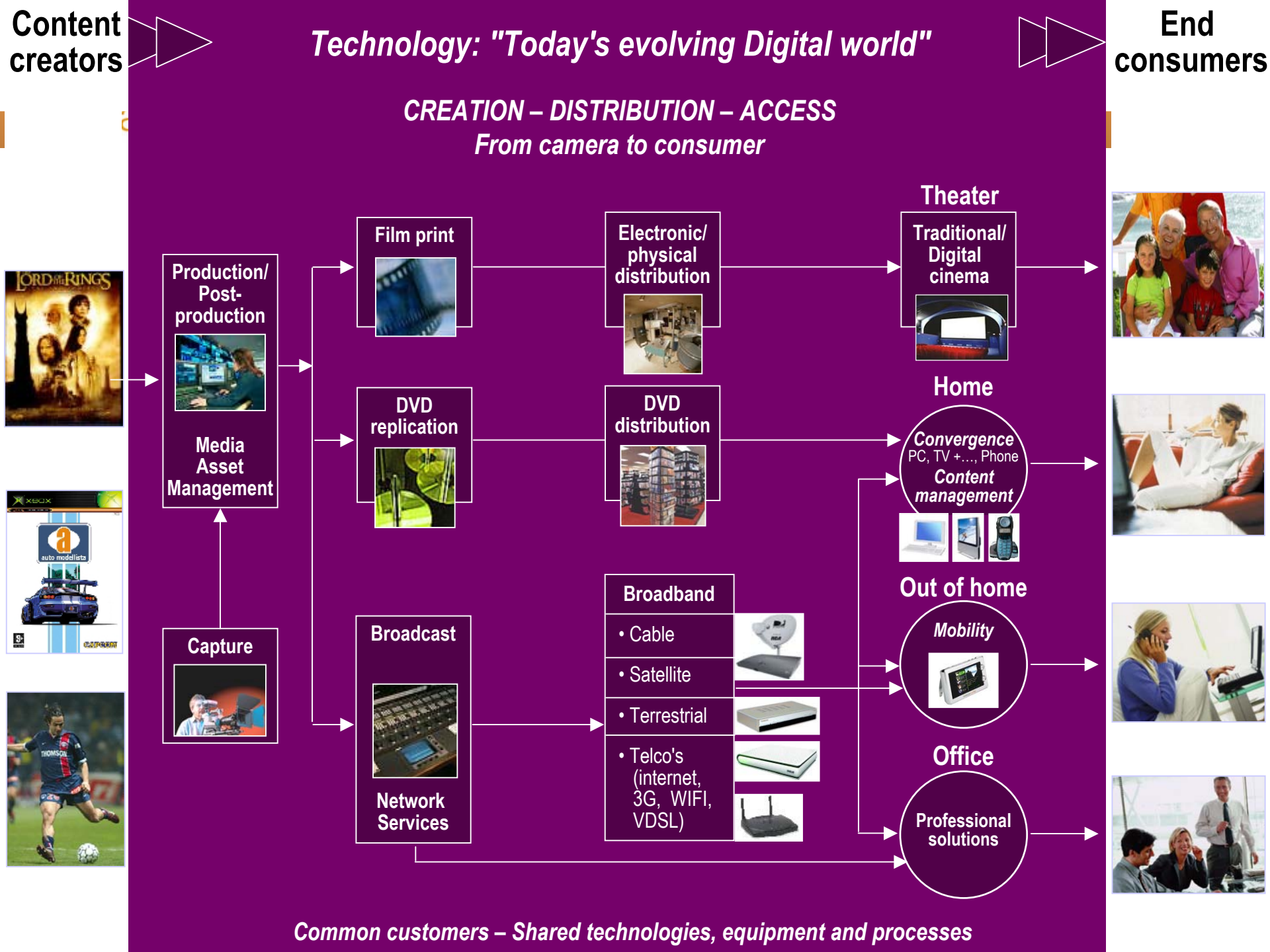
TECHNICOLOR. 

 grass valley

RCA

THOMSON

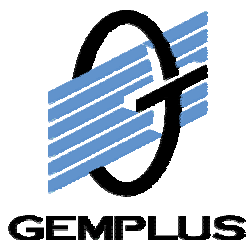




A SYSTEM WHOSE TIME HAS COME

- Authorized Domain System
 - Easy for the consumer to use
 - More comprehensive than “Link” technologies
 - End-to-End Solution
- Smart card technology now widely deployed
 - CableCARD
 - DBS Security Cards
- Rapidly growing base of digital televisions and home networks

Companies expected to participate as members of the SmartRight Licensing Authority include:





ACCOMPLISHES FCC's BROADCAST FLAG OBJECTIVES

- Offers secure and redundant protection of DTV content
- Prevents indiscriminate unauthorized redistribution over the Internet
- Fulfills the consumer's expectation and enjoyment of digital TV
- Will be licensed on reasonable and non-discriminatory terms

- SmartRight is an encryption-based digital broadcast content protection system
 - Prevents indiscriminate redistribution of protected DTV content over the Internet
 - Permits secure redistribution within an authorized domain of devices known as a “Personal Private Network” (PPN)
 - Provides “end-to-end” protection from the moment content is received and throughout its movement through the PPN

Eric Diehl

***Worldwide Security Domain Manager
Thomson***

- SmartRight incorporates multiple redundant security features to protect DTV content
 - Attack-resistant cryptographic protocols
 - Highly secure, 128-bit AES cipher
 - Renewability
 - Tamper-resistant, secure modules
 - Optional “Copyright Watermark”
 - Protects analog output content
 - Prevents peer-to-peer network distribution
 - Detection only when rendering

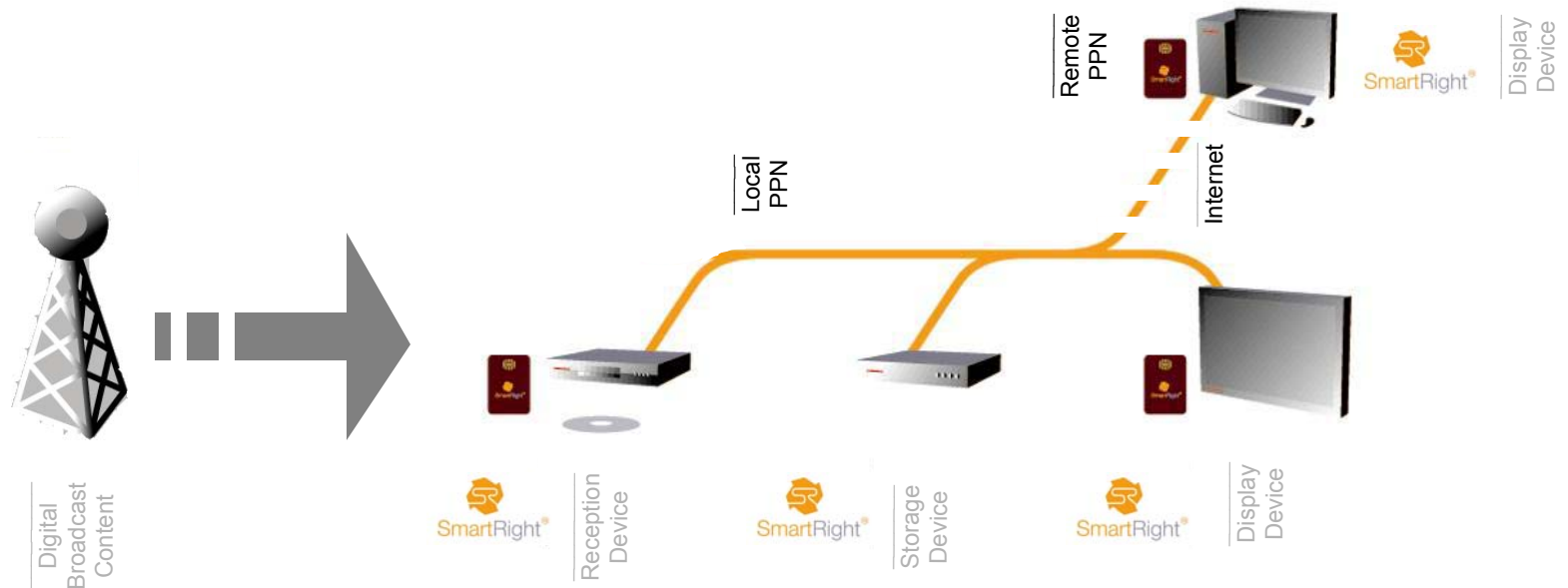
TAMPER-RESISTANT SECURE MODULES

- SmartRight uses embedded or removable, tamper-resistant Secure Modules
- SmartRight removable modules incorporate
 - National Renewable Security Standard (NRSS) cards, or
 - ISO-7816 “Smart cards”
- Secure modules include a:
 - Converter Module (in a Reception Device)
 - Terminal Module (in a Display Device)

- The SmartRight PPN is composed of locally- and remotely-located SmartRight-compliant devices
 - Local PPN
 - At least one Reception Device
 - A reasonably-limited number (such as 10) of Display Devices
 - Optional Storage Devices
 - Remote PPN
 - Includes consumer's SmartRight devices in a car, second home, office, mobile devices

PERSONAL PRIVATE NETWORK

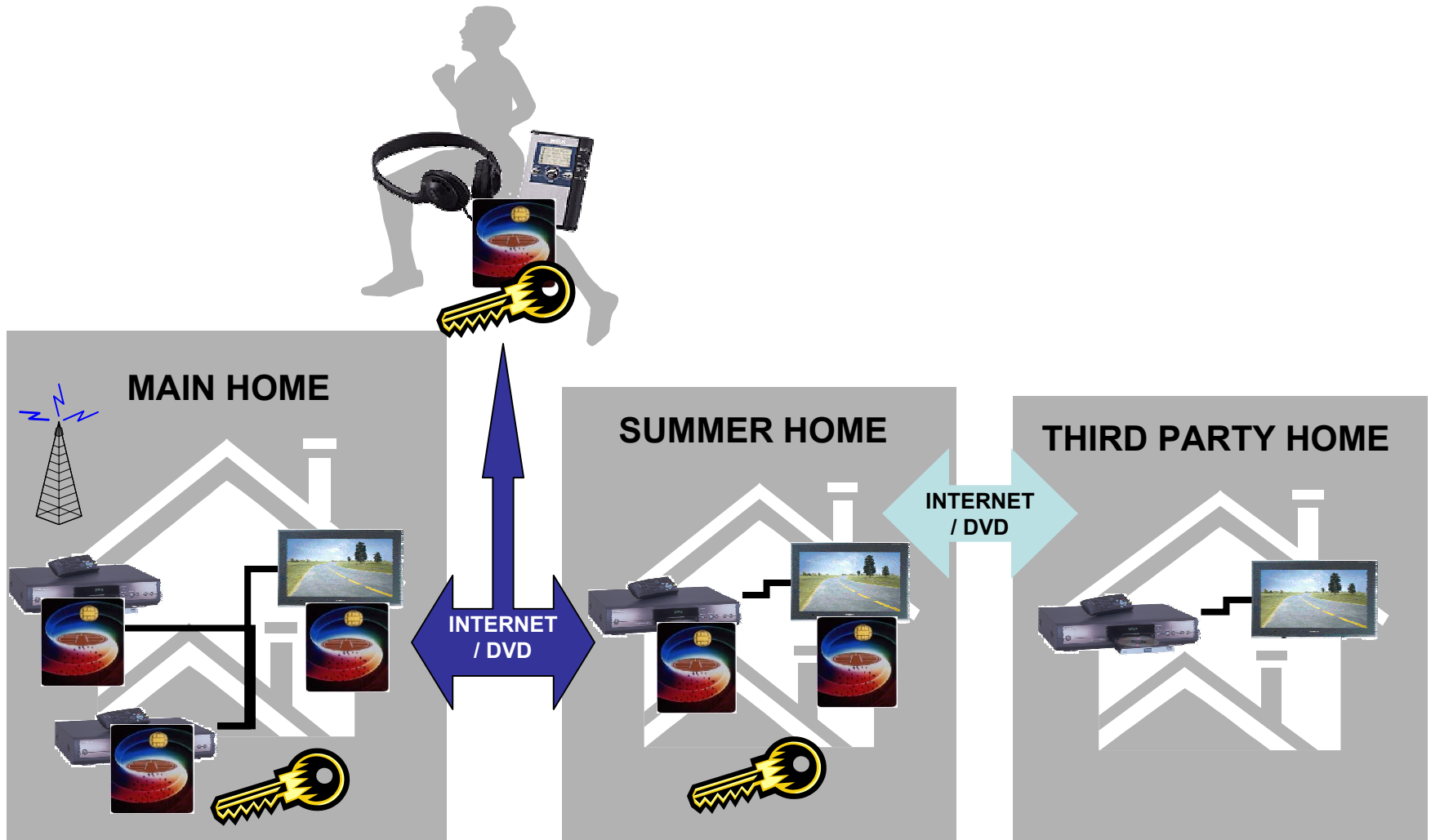
Privately protected content SmartRight™ protected content



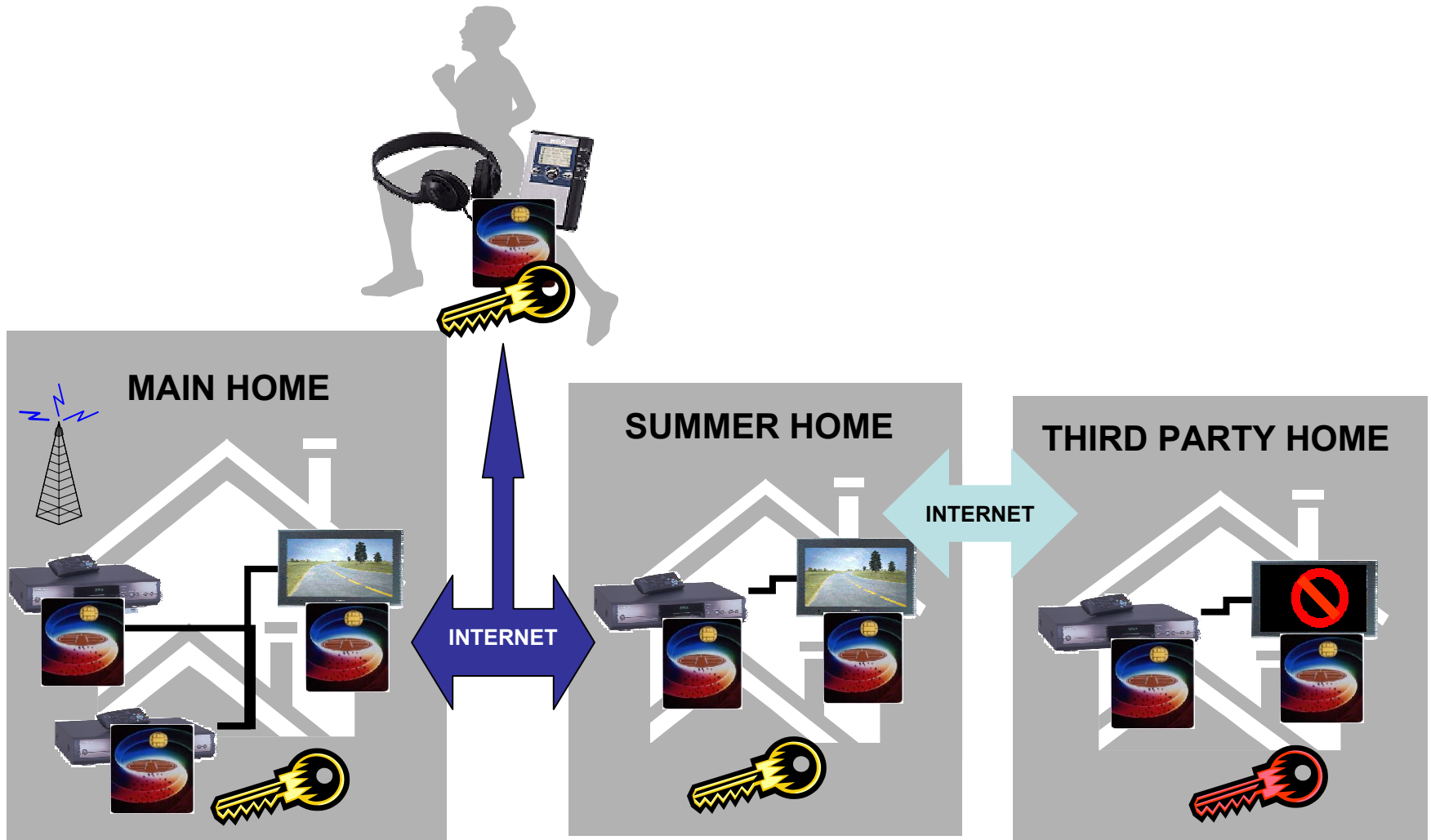
BROADCAST FLAG ENVIRONMENT

- SmartRight within the context of the Broadcast Flag:
 - Unmarked Content
 - Freely copied, stored and redistributed without restriction
 - Marked Content
 - Freely copied, viewed and securely redistributed within the PPN
 - Easily exported to other FCC-authorized Broadcast Flag technologies
 - Cannot be indiscriminately redistributed over the Internet in a usable (i.e., viewable) manner
 - SmartRight always screens content for the Broadcast Flag

HOW PPN WORKS WITH **UNMARKED** CONTENT



HOW PPN WORKS WITH **MARKED** CONTENT



- Renewability
 - In the case of a “class attack,” SmartRight provides true renewability
- Revocation
 - Three-level revocation where only individual devices are compromised:
 - Revocation of a specific Smart card
 - Revocation of a PPN
 - Revocation of a Display Device
 - Revoked entities are tracked by the SmartRight Association

INTEROPERABILITY

- Interoperable with:
 - All FCC-approved Broadcast Flag technologies
 - Import or export of marked content
 - All interfaces (IP, WiFi, Firewire, USB, etc.)
 - All multimedia formats such as MPEG-2, MPEG-4 or mp3PRO, etc.
- Protects content delivered via:
 - Cable, DBS, Telco/broadband, etc.
 - Prerecorded media (e.g., DVDs)

LEGACY EQUIPMENT/CONTENT

- Preserves functionality of legacy equipment
 - Analog TVs
 - Early adopter HDTVs
 - DVD players
- Preserves consumers' content libraries

- SmartRight is licensed on a reasonable and non-discriminatory basis
- Provisions include:
 - Limitations on changes to the specification and compliance rules
 - Option for adopters with essential patents to preserve their IP rights
 - Self-certification by adopters
 - Allows consumers to contest revocation